

ANNEX (1)
BETWEEN
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
ARMSTRONG FLIGHT RESEARCH CENTER
AND UNIVERSITY ENTERPRISES CORPORATION AT CALIFORNIA STATE
UNIVERSITY SAN BERNARDINO
UNDER SPACE ACT UMBRELLA AGREEMENT
NO. 33843, (ANNEX 33844).

ARTICLE 1. PURPOSE

The purpose of this Agreement is to collaborate on the building and testing of reference and Prandtl design propellers/rotors. Activities will also include ground testing propellers and comparing two separate designed propeller/rotors. The collaboration will primarily focus on the technology included in NASA License Agreement DN-1793.

This partnership will also provide NASA and CSUSB the opportunity to engage with the faculty and/or student teams on the licensing and commercialization of NASA technologies.

The legal authority for this Annex, consistent with the Umbrella Agreement, is in accordance with the National Aeronautics and Space Act (51 U.S.C. § 20113(e)).

ARTICLE 2. RESPONSIBILITIES

A. NASA AFRC will use reasonable efforts to:

1. Complete knowledge transfer related to License Number DN-1793
2. Provide NASA SME support related to Prandtl, Performance and Power Efficiency
3. Identify candidate propellers to be studied and potentially used for multi-copter testing
4. Work collaboratively with Partner to design and manufacture propeller test articles
5. Work collaboratively with Partner to plan, test and evaluate test data

B. Partner will use reasonable efforts to:

1. Perform feasibility assessment on up to 2 or more candidate propellers
2. Provide findings upon the completion of each assessment
3. Test bench development and instrumentation
4. Identify candidate propellers to be studied and potentially used for multi-copter testing
5. Work collaboratively with NASA AFRC to design and manufacture propeller test articles
6. Work collaboratively with NASA AFRC to plan, test and evaluate test data

ARTICLE 3. SCHEDULE AND MILESTONES

The planned major milestones for the activities for this Annex defined in the "Responsibilities" Article are as follows:

- | | |
|---|--------------------------------------|
| 1. Identify up to 2 or more candidate propellers | 06/30/2022 |
| 2. Complete design of up to 2 or more newly designed propellers | 06/30/2022 |
| 3. Test and calibrate test equipment on known multi-copter propellers | 06/30/2022 |
| 4. Develop plan for testing propeller test articles | 06/30/2022 |
| 5. Test manufactured propeller test articles | September 2022 |
| 6. Evaluate test data | Within 1 year of agreement execution |
| 7. Complete final report | Within 1 year of agreement execution |

ARTICLE 4. FINANCIAL OBLIGATIONS

There will be no transfer of funds between the Parties under this Agreement and each Party will fund its own participation. All activities under or pursuant to this Agreement are subject to the availability of funds, and no provision of this Agreement shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, (31 U.S.C. § 1341).

ARTICLE 5. INTELLECTUAL PROPERTY RIGHTS - DATA RIGHTS

A. Data produced under this Annex which is subject to paragraph C. of the Intellectual Property Rights - Data Rights Article of the Umbrella Agreement will be protected for the period of 2 years.

B. Under paragraph H. of the Intellectual Property Rights - Data Rights Article of the Umbrella Agreement, Disclosing Party provides the following Data to Receiving Party. The lists below may not be comprehensive, are subject to change, and do not supersede any restrictive notice on the Data provided.

1. Background Data:

The Disclosing Party's Background Data, if any, will be identified in a separate technical document.

2. Third Party Proprietary Data:

The Disclosing Party's Third Party Proprietary Data, if any, will be identified in a separate technical document.

3. Controlled Government Data:

The Disclosing Party's Controlled Government Data, if any, will be identified in a separate technical document.

4. The following software and related Data will be provided to Partner under a separate Software Usage Agreement: None

ARTICLE 6. TERM OF ANNEX

This Annex becomes effective upon the date of the last signature below ("Effective Date") and shall remain in effect until the completion of all obligations of both Parties hereto, or one year from the Effective Date, whichever comes first, unless such term exceeds the duration of the Umbrella Agreement. The term of this Annex shall not exceed the term of the Umbrella Agreement. The Annex automatically expires upon the expiration of the Umbrella Agreement.

ARTICLE 7. RIGHT TO TERMINATE

Either Party may unilaterally terminate this Annex by providing thirty (30) calendar days written notice to the other Party.

ARTICLE 8. POINTS OF CONTACT

The following personnel are designated as the Points of Contact between the Parties in the performance of this Annex.

Management Points of Contact

NASA Armstrong Flight Research Center
Benjamin Tomlinson
Technology Transfer Officer
Mail Stop: 1100
P.O. Box 273
Edwards, CA 93523
Phone: 661-276-2190
benjamin.h.tomlinson@nasa.gov

University Enterprises Corporation at
California State University San
Bernardino
Timothy D. Usher
Physics
5500 University Parkway
San Bernardino, CA 92407-2318
Phone: 909 537-5410
tusher@csusb.edu

ARTICLE 9. MODIFICATIONS

Any modification to this Annex shall be executed, in writing, and signed by an authorized representative of NASA and the Partner. Modification of an Annex does not modify the terms of the Umbrella Agreement.


ARTICLE 10. SIGNATORY AUTHORITY

The signatories to this Annex covenant and warrant that they have authority to execute this Annex. By signing below, the undersigned agrees to the above terms and conditions.

NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION
ARMSTRONG FLIGHT RESEARCH
CENTER

UNIVERSITY ENTERPRISES
CORPORATION AT CALIFORNIA
STATE UNIVERSITY SAN
BERNARDINO

BY: _____
David McBride
Center Director

BY:  _____
Dorota Huizinga Associate Provost for
Academic Research

DATE: _____

DATE: **Feb 16, 2022**

DATE: **Feb 16, 2022**